

**Notice of Allowability**

Application No.

10/659,362

Applicant(s)

YAMAMOTO, MASAYUKI

Examiner

Joseph D. Manoskey

Art Unit

2113

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/27/06.
2. ☒ The allowed claim(s) is/are 21-54.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>2/27/06 &amp; 3/24/06</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material  | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other _____   |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The Examiner thanks the Applicant for resubmitting Japanese Patent Publication 2002 063063. However it appears that Japanese Patent Publication 2001 063063 was accidentally submitted in its place. The Examiner is entering a complete copy of Japanese Patent Publication 2002 063063.

### ***Allowable Subject Matter***

2. Claims 21-54 are allowed.

### ***Reasons for Allowance***

3. The following is an examiner's statement of reasons for allowance:

4. Concerning claims 21-29, the prior art does not teach "an associating step in which said management server associates said first failure notification and said second failure notification based on relationship information between said real volume and said virtual volume".

5. Concerning claims 30-39, the prior art does not teach "said processor associates a first failure notification of said plurality of failure notifications indicating an error of said virtual volume with a second failure notification of the plurality of failure notifications

indicating an error of said real volume based on relationship information, stored in the memory, between said real volume and said virtual volume”.

6. Concerning claims 40-44 and 51, the prior art does not teach “wherein the processor identifies whether or not an issuance of the second error notification causes an issuance of the first error notification based on a relationship between the volume information and the virtual volume information, and, if the issuance of the second error notification causes the issuance of the first error notification, outputs first information indicating that a first failure notified by the second error notification is a causal error of the first error notification”.

7. Concerning claims 45-48 and 52, the prior art does not teach “wherein, if the first virtual volume is related to the first volume, the processor identifies whether or not the second failure causes issuance of the first notification, and, if the second failure causes the issuance of the first notification, outputs information indicating that the second failure is a causal error of the first notification”.

8. Concerning claims 49 and 53, the prior art does not teach “a processor, coupled to the interface, configured to identify whether or not an issuance of the second error notification causes an issuance of the first error notification based on a relationship between the volume information and the virtual volume information”.

9. Concerning claims 50 and 54, the prior art does not teach “a processor, coupled to the interface, configured to identify whether or not the first virtual volume is related to the first volume based on the virtual volume information and the volume information, to identify whether or not the second failure causes issuance of the first notification if the first virtual volume is related to the first volume, and to output information indicating that the second failure is a causal error of the first notification if the second failure causes the issuance of the first notification”.

10. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Manoskey whose telephone number is (571) 272-3648. The examiner can normally be reached on Mon.-Fri. (7:30am to 4pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2113

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JDM  
April 11, 2006

  
ROBERT BEAUSOLIEL  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100